IAR Systems fully supports the brand-new Industrial-Grade PX5 RTOS

IAR Systems awarded Embedded Workbench streamlines the development of commercial and safety-critical applications based on PX5's new real-time operating system

Uppsala, Sweden – January 26, 2023 – The PX5 RTOS has just been launched, and IAR Systems®, the world leader in software and services for embedded development, already offers full support for the new real-time operating system. The PX5 Industrial RTOS is an advanced 5th-generation RTOS designed for the most sophisticated and developed embedded applications. The PX5 RTOS helps embedded systems developers to manage the real-time scheduling of their multithreaded applications while increasing the quality, safety, and security of embedded devices. With PX5 RTOS being fully supported in IAR Embedded Workbench® for Arm®, developers can leverage an integrated development environment for seamlessly building and debugging their commercial safety-critical applications from source code to firmware. Accordingly, customers benefit from reduced time-to-market, improved device firmware quality, and portability across device platforms.

The IAR Embedded Workbench is a complete development toolchain with a highly optimizing compiler and advanced debugging functions. Thousands of embedded developers worldwide value the powerful IAR C/C++ Compiler™ for its best-in-class optimizations. In conjunction with PX5 RTOS' minimal footprint of ca. 1KB, which automatically scales in size with regards to the application, companies can therefore reduce their BOM (Bill of Materials) by using smaller devices or adding more differentiating features to their existing platform. PX5 RTOS is deterministic regardless of system load, while IAR's code analysis tools C-STAT and C-RUN aim for a reliably tested code basis for demonstrably the highest code quality. For safety-critical applications, IAR Embedded Workbench for Arm is available as a functional safety edition certified by TÜV SÜD and complies with the requirements of ISO 26262.

The PX5 RTOS features a native implementation of the industry standard POSIX pthreads API as well as best-of-class size and performance. As for safety and security, the PX5 RTOS provides Pointer/Data Verification (PDV) technology, which developers can leverage at run-time to verify function return addresses, function pointers, system objects, global data, and memory pools. This technology is unique to the PX5 RTOS. In addition to the native POSIX pthread support (semaphore, mutex, message queue, etc.), the PX5 RTOS also offers real-time extensions such as event flags, fast queues, tick timers, memory management, and more. Given the PX5 RTOS industry-standard POSIX pthreads API support, a wide range of software stacks are instantly enabled – both open source and commercial – for real-time embedded IoT platforms.

"We are striving for simplicity, and PX5 RTOS is purpose-built to deliver benefits across all IoT sectors, including commercial and safety-critical applications", said Bill Lamie, President of PX5. "We are excited to partner with IAR Systems, a trusted leader over many years in embedded development tools. In fact, we fully leveraged the IAR Embedded Workbench for Arm, including compiler, debugger, code coverage, and their C-STAT static analysis tool to bring the PX5 RTOS to life. We firmly believe using the IAR Systems development tools has helped us deliver on the promise of the PX5 RTOS in record time."

– more –

"We have worked with Bill Lamie and his team for close to two decades, and their expertise and innovative energy are unparalleled", said Anders Holmberg, CTO of IAR Systems. "We are excited to support this new product offering from the very start. PX5 RTOS is highly reliable and deterministic and fits into some of the most memory-constrained devices. In conjunction with our tool suite, it allows developers to realize new applications quickly while increasing their embedded devices' quality, safety, and security."

More information about PX5 RTOS is available at www.px5rtos.com. Further information on the IAR Embedded Workbench for Arm, its capabilities in detail, and the supported devices are available at www.iar.com/arm.

Ends

Editor's Note: IAR Systems, IAR Embedded Workbench, Embedded Trust, C-Trust, C-SPY, C-RUN, C-STAT, IAR Visual State, I-jet, I-jet Trace, IAR Academy, IAR, and the logotype of IAR Systems are trademarks or registered trademarks owned by IAR Systems AB. All other product names are trademarks of their respective owners.

IAR Systems Contacts

Rafael Taubinger, Senior Product Marketing Manager, IAR Systems

Tel: +46 18 16 78 00 Email: rafael.taubinger@iar.com

About PX5

Headquartered in San Diego, CA, PX5 offers the industry's most advanced runtime solutions for deeply embedded applications. PX5 products include full source code and are available free of run-time royalties. For more information, please visit www.px5rtos.com, or e-mail info@px5rtos.com.

About IAR Systems

IAR Systems provides world-leading software and services that accelerate developer productivity in embedded development and embedded security, enabling companies worldwide to create and secure the products of today and the innovations of tomorrow. IAR Systems supports 15,000 devices from over 200 semiconductor partners, serving some 100,000 developers working for a mix of Forbes 2000 companies, SMEs, and startups. Founded in 1983, IAR Systems is still headquartered in Uppsala, Sweden, with more than 220 employees in 14 offices distributed across APAC, EMEA, and North America. IAR Systems is owned by I.A.R. Systems Group AB, listed on NASDAQ OMX Stockholm, Mid Cap (ticker symbol: IAR B). Learn more at www.iar.com.